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somewhat in sensitiveness when stored, but I could hardly expect that the change would amount to so much as a three-fold increase; and yet it was so. After five months the new LUMIÈRE plates, at first so slow, were as sensitive as the preceding ones, and exceeded in sensitiveness all my other plates. A similar change took place in those of other makers. * *

"The sensitiveness does not by any means increase indefinitely with the time. On the contrary, it soon reaches a maximum, which persists for some time, and after this the sensitiveness diminishes. * *

"For LUMIÈRE plates this time has been found to be from five to seven months after manufacture. By taking advantage of this fact much can be gained; sometimes, as I have said, an increase in sensitiveness of three or four times. * *

"From the foregoing the astronomer may take warning never to assume that plates made from the same emulsion are equally sensitive if they are used at different times. * * For the same reason it is also very difficult to determine beforehand what exposure should be given in order to obtain stars of a certain magnitude. It is quite impossible to do this (leaving out of the question changes in the transparency of the air), without taking into account the age of the plates." W. W. C.

ACKNOWLEDGMENTS.

The success of the LICK Observatory eclipse expedition to Chile is largely due to the efficient and willing aid given by those with whom I came in contact—more particularly to the Regents of the University of California; the Government of Chile; JOHN KING, British Consul at Carrizal Bajo; the firm of GONZALEZ, IZAGA & Co., owners of the Mina Bronces mine; FILIPE BRAY, captain of the mine; and R. A. WALKER, engineer from Valparaiso.

A day or two before the eclipse the staff of volunteer assistants was farther increased by the arrival of the following gentlemen: W. F. GALE, the amateur astronomer from Paddington, N. S.W.; Mr. TIRAPEGUI, mining engineer from Santiago; J. J. AUBERTIN, author of several books of travel, and his private secretary, A. HOLE, both from London; Lieutenants BROWN, BODGER and WILSON, R. N., H. M. S. *Melpomene.* All of the above-named gentlemen took active parts in the observations during totality.

Special acknowledgments are also due E. J. MOLERA, C. E., San Francisco; Señor GUERRERO, Consul for Chile, San Francisco; WM. HENDERSON (of BALFOUR, GUTHRIE & Co.), Valparaiso; and Professor E. S. HOLDEN, every ready to do all in his power to assure the success of the expedition.

Finally, it remains to be chronicled that astronomical science owes a debt of gratitude to Mrs. PHŒBE HEARST, who made the expedition possible by generously offering to defray the expenses.

J. M. SCHAEBERLE.

THE BINARY STAR β 733 (85 PEGASI).

A recent observation of this most interesting of Mr. BURNHAM'S double stars indicates that the computed period of 22.6 years (which I deduced from his measures extending from 1878 to 1888) will be somewhat in excess of the true time of revolution, as can be seen from an inspection of the following residuals, which involve all the observations at hand. Each residual is found by subtracting the value given by my orbit (see *Astronomical Journal*, No. 248) from that given by direct measurement. All the observations were made by Mr. BURNHAM excepting the last, which was made by myself. Since 1878 the position-angle of the companion has increased 255°.

Date.	Obs. — Comp.		No. of Obs.
	ΔP	Δs	
1878 73	− 6°.3	+ 0″.06	3 nights.
1879.46	− 2 .6	+ 0 .08	5 nights.
1880.59	+ 1 .7	− 0 .06	5 nights.
1881.54	+ 7 .2	− 0 .10	1 night.
1883.75	− 7 .2	....	1 night. (rough)
1888.69	− 1 .6	+ 0 .04	5 nights.
1889.59	+ 2 .1	− 0 .09	4 nights.
1890.55	+ 1 .6	− 0 .23	4 nights.
1891.56	+ 9 .3	− 0 .18	3 nights.
1893.65	+12 .6	+ 0 .10	3 nights.

J. M. S.